

## SPECIFICATION

This nonprovisional patent application claims the filing date benefit of Provisional Application number 60/203,184, filed 05/08/2000.

### TITLE OF INVENTION

Mindmatch: Method and System for Mass Customization of Test Preparation.

### BRIEF SUMMARY OF THE INVENTION

The invention is a method and system for performing customized test preparation, assisted by a unique search agent which retrieves test questions and related information (such as lectures relating and solutions to said questions). The search function is fueled by an issue-based classification system which is highly responsive to the user's test performance. The system comprises a multimedia database, whose quanta of information each possess one or more predefined issues, so that the user's responses to test questions can activate an issue-based search. A typical search retrieves a constellation of preparatory materials including: a lecture video clip, an animated solution to a test question the user answered incorrectly, and a drill set comprised of questions similar to those the user answered incorrectly. Initially, a user is tested and the user's incorrect responses serve to pinpoint issues that form the basis of said search for preparatory materials. As the user continues to train, the search engine continues to adapt to the user by retrieving materials that best suit the user at that instant. The user's performance is recorded, evaluated, updated and activated through a history of interaction with the system.

However, the user can deactivate the system and design, within certain predetermined parameters, a self-prescribed course of study. Through continued interaction with the program, the user gains a personalized, computer-assisted iterative course of study whose specificity surpasses that of existing courses of preparation.

The contents of the database are typically recorded as simple text, graphics, animated display, audio description and video clips. The system will comprise: lectures, test questions, explanations and refutations of answers to questions, and diagnostic materials. These components will be linked in the manner specified herein to form a dynamic database with a user interface. Both the content and the classification system have been developed for the Law School Admission Test (LSAT), the exam that has provided the inspiration and the cause for immediate application of this invention. Similar systems are also being developed for subjects including, but not limited to: the Scholastic Assessment Test (SAT), the Graduate Record Exam (GRE), mathematics, language and science. These and other aspects of the invention will be apparent from and elucidated with reference to the embodiments described hereinafter.

#### BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a flow chart of the system in which the method of the invention is used. The flow chart offers a general survey with the most important elements. The process begins with a Diagnostic Test, which is used to activate the initial customized search for preparatory materials. Materials retrieved by the search agent typically contain: text, video clips of lectures, animated problem solving displays demonstrating methods of solution, and customized drill sets. The first phase of the process (referred to as Theory)

is intended to teach skills that will assist in the solution of test questions, and at its conclusion, a theory quiz is administered and the results of the quiz generate yet another customized search for preparatory materials. With theory satisfied, the user enters the Application phase, where questions are no longer presented by category, but rather are administered in the sequence customary for an actual test. Application begins with a full length test, which is scored and the incorrect responses provided by the user become the stimuli for a customized search for solutions and further questions of the same type. For a typical incorrect response, the search agent retrieves: an explanation of the correct response (which may include animated solutions as well as lectures explaining the method), a refutation (if appropriate) for the incorrect response, and a set of N questions that are the best matches for the stimulus question. Thus, for each scored test, the process will generate a customized drill set containing (PxN) questions, where P is the number of incorrect responses provided by the user and N is the number of matches found. The user can program the value of N and modify the cycle, by following the alternative Crash Course cycle- a route that either sidesteps the theory phase (i.e., taking a problems-based tack that utilizes theoretical materials on a need to know basis) or calls for enhanced theory. In addition, a user can activate an independent search by entering search-sensitive fields, such as a question number from a prior exam. This iterative course cycle will continue for as long as the user interacts with the system.

FIG. 2 shows details of the elements of the Application phase, which was set forth in Fig 1. This diagram refers specifically to the Law School Admission Test (LSAT).

FIG. 3 shows the rationale behind the classification system that fuels the search engine.

- FIG. 4 shows some details of the issue-based search mechanism for the LSAT .
- FIG. 5 shows an exploded view of the classification system for the LSAT
- FIG. 6 shows the inspiration for the preferred embodiment of the graphical user interface.

While preferred embodiments of the invention have been shown and described in some detail, it will be readily understood and appreciated that numerous omissions, changes and additions may be made without departing from the spirit and scope of the present invention.

09851636 "0508001  
T02050" 9E9T5B60